UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/902,079	07/10/2001	Paul Hansen	43515/234564	7797

826 7590 08/12/2004

ALSTON & BIRD LLP
BANK OF AMERICA PLAZA
101 SOUTH TRYON STREET, SUITE 4000
CHARLOTTE, NC 28280-4000

EXAMINER	
SHECHTMAN, SEAN P	

ART UNIT	PAPER NUMBER
2125	

DATE MAILED: 08/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/902,079	HANSEN, PAUL	
	Examiner	Art Unit	
	Sean P. Shechtman	2125	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 July 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-82* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-82* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10 July 2001* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *7/10/01*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-82 are presented for examination.

Drawings

2. The drawings are objected to under 37 CFR 1.84(h)(5) because Figure 1 show(s) modified forms of construction in the same view.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-82 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Claims 1 recites the limitation of " the countertop-receiving structure" in line 7, however, claim 1 recites the limitation of an "existing countertop-receiving structure" in the preamble and claim 1 recites the limitation of "a countertop receiving structure" in lines 5-6. Examiner respectfully submits that the claims, as such, do not require that "a countertop receiving structure" be an "existing countertop-receiving structure". Therefore, it is not clear which countertop receiving structure is "the countertop-receiving structure". Claims 19, 37, and 60 contain the same limitations in different lines, and therefore, it is not clear which countertop receiving structure is "the countertop-receiving structure".

4. Claims 37 and 60 recite the limitations "the collection of data" in lines 5 and 4 respectively. There is insufficient antecedent basis for these limitations in the claims.

5. Claims 1, 37, and 60 recite the limitations "the formed countertop" in the last 3-4 lines. There is insufficient antecedent basis for these limitations in the claims. The examiner respectfully asserts that a template configured to be usable to form the countertop does not provide proper antecedent basis having formed the formed countertop.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1, 5-7, 9, 10, 14-18, 19, 23-25, 27, 28, 32-36, 37, 41-45, 47, 48, 56-59, 60, 64-68, 70, 71, 79-82 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 6,389,322 to Park in view of U.S. Pat. No. 5,642,293 to Manthey. Claims 1, 5-7, 9, 10, 14-18, 19, 23-25, 27, 28, 32-36, 37, 41-45, 47-52, 56-59, 60, 64-68, 70-75, 79-82 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 6,389,322 to Park in view of U.S. Pat. No. 5,988,862 to Kacyra.

Referring to claims 1, 19, 37, and 60, Park teaches a method, program, and device for forming a template for a countertop, the template being usable to form a countertop configured for application to an existing countertop-receiving structure (Abstract; Cover figure), said system comprising:

collecting data photographically with a collection module camera (Fig. 1, element 1);

collecting data according to a coordinate system established with respect to a countertop-receiving structure (Col. 2, lines 52-58);

the collected data comprising a plurality of points directly corresponding to and defining the countertop-receiving structure (Col. 2, lines 52-58; Col. 3, lines 21-30);

processing the collected data so as to form a closed-boundary representation of a countertop corresponding to the countertop-receiving structure (Fig. 8; Col. 16, lines 41-52); and

dimensioning the countertop representation (Col. 11, lines 23-50; Col. 16, lines 23-29);

the countertop representation forming a template configured so as to be usable to form the countertop (Col. 2, lines 59-67; Col. 3, lines 1-2; Col. 18, lines 51-54);

forming the countertop according to the template, the formed countertop thereby being correspondingly engageable with the countertop-receiving structure (Col. 1, lines 2-65).

Park clearly teaches the manufacture of covers for articles of all types, wherein typical applications include table covers, construction application and wall covering, wherein the covering or skin maybe of sheet metal, rubber, fiberglass, etc (Col. 1, line 66 – Col. 2, line 11; Col. 5, line 65 – Col. 6, line 5). The examiner respectfully asserts that a metal, rubber, or fiberglass cover for a table in the general field of description given by Park is a countertop.

Referring to claims 5, 23, 41-43, 64-66, Park teaches a method, program, and computer device wherein collecting data further comprises receiving a signal directly from each of the plurality of points with the data collection module, the data collection module being configured so as to be capable of determining a coordinate of each point with respect to the coordinate system (Col. 10, lines 53-64).

Referring to claims 6, 24, 44, 67, Park teaches a method, program, and computer device further comprising disposing a sound emitter at each of the plurality of points wherein the sound emitter is configured to emit a sound signal directly from each point, the sound signal being receivable by the data collection module. Referring to claims 7, 25, 45, 68, Park teaches a method, program, and computer device further comprising disposing a light emitter at each of the plurality of points wherein the light emitter is configured to emit a light signal directly from each point, the light signal being receivable by the data collection module (Col. 10, lines 53-64).

Referring to claims 9, 27, 47, 70, Park teaches a method, program, and computer device wherein collecting data further comprises photogrammetrically determining a coordinate of each point with respect to the coordinate system with a plurality of digital images of each point taken from a plurality of image acquisition locations remotely disposed from the countertop-receiving

structure, each point being indicated with a marker disposed directly thereon, the marker being configured to have a sharp contrast with respect to the respective point (Col. 10, lines 53-64).

Referring to claims 10, 28, 48, 71, Park teaches a method, program, and computer device wherein processing the data further comprises arranging the plurality of points according to a two-dimensional coordinate system on at least one of a horizontal plane and a vertical plane (Col. 7, lines 45-55).

Referring to claims 14, 32, 56, 79, Park teaches a method, program, and computer device wherein dimensioning a countertop representation further comprises adding at least one of a numerical dimension and a note to the countertop representation (Col. 10, lines 5-19).

Referring to claims 15, 33, 57, 80, Park teaches a method, program, and computer device further comprising configuring the template to be cooperable with computer-aided design/computer-aided manufacturing (CAD/CAM) computer software following dimensioning of the countertop representation (Col. 19, lines 18-29).

Referring to claims 16, 18, 34, 36, 58, 81, Park teaches a method, program, and computer device further comprising configuring the template to be cooperable with a Computer Numerical Control (CNC) machine following dimensioning of the countertop representation and forming the countertop with the CNC machine according to the template (Col. 3, lines 1-2).

Referring to claims 17, 35, 59, 82, Park teaches a method, program, and computer device further comprising configuring the template to as to be transmittable over an electronic data communication link following dimensioning of the countertop representation (Col. 3, lines 32-52).

Referring to claims 1, 19, 37, and 60, while Park clearly teaches collecting data using photographs taken by a camera, Park fails to teach collecting data with a single portable data collection module.

The examiner respectfully submits that the claims, as such, do not even require that the data collected according to a coordinate system established with respect to a countertop-receiving structure be the same data as the data collected with a single portable data collection module.

However, referring to claims 1, 19, 37, and 60, Manthey teaches analogous art, including collecting data using photographs with a camera that is a single portable data collection module (See cover figure and abstract of '293).

Therefore, it would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify the teachings of Park to collect photographic data with a camera, as taught by Manthey.

One of ordinary skill in the art would have been motivated to combine these references because Manthey teaches eliminating stationary equipment using known reference points included in a photogrammetry target (Col. 1, lines 30-38 of '293). Furthermore, Manthey teaches a vision-based approach that to determining surface attributes without knowledge of the location of the image-obtaining equipment (Col. 1, lines 41-45 of '293). Further still, Manthey clearly teaches that advantages of the invention are specifically geared toward providing a portable apparatus for the vision-based approach to determining surface attributes (Col. 1, lines 46-49 of '293).

However, referring to claims 1, 19, 37, and 60, Kacyra teaches analogous art, wherein a system for quickly and accurately imaging and modeling 3D objects (Title of '862), wherein Kacyra specifically teaches an example directed toward modeling objects of a persons kitchen (Col. 29, line 58 – Col. 30, line 8 of '862), wherein Kacyra teaches a method, program, and computer device wherein data is collected with a single portable data collection module (See Fig. 3A of '862). Referring to claims 49 and 72, Kacyra teaches the computer program and device above, wherein the processing portion for processing the data is further configured to define a best-fit line between points. Referring to claims 50 and 73, Kacyra teaches the computer program and device above, wherein the processing portion for processing the data is further configured to define a free-form line between points. Referring to claims 51 and 74, Kacyra teaches the computer program and device above, wherein the processing portion for processing the data is further configured to define a line between points. Referring to claims 52 and 75, Kacyra teaches the computer program and device above, wherein the processing portion for processing the data is further configured to configure an intersection of lines, each line being defined by a plurality of points, to facilitate formation of the closed-boundary countertop representation (Col. 3, lines 37-46).

Therefore, it would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify the teachings of Park to include data collected with a single portable data collection module and processing data, as taught by Kacyra.

One of ordinary skill in the art would have been motivated to combine these references because Kacyra teaches a system that can quickly and accurately sense the geometric position of

objects in a 3D space of a collected point cloud. Furthermore, Kacyra teaches recognizing geometric shapes represented by said point cloud and generating a model of said shapes. Further still, Kacyra teaches advantageous application of the model to CAD tools (Col. 1, lines 7-19 of '862).

7. Claims 1, 15, 16, 18, 19, 33, 34, 36, 37, 49-52, 57, 58, 60, 72-75, 80, 81 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (AAPA) in view of U.S. Pat. No. 5,988,862 to Kacyra. Claims 1-4, 15, 16, 18-22, 33, 34, 36-40, 49-52, 57, 58, 60-63, 72-75, 80, 81 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (AAPA) in view of U.S. Pat. No. 6,025,847 to Marks.

Referring to claims 1, 19, 37, and 60, AAPA teaches a method, program, and device for forming a template for a countertop, the template being usable to form a countertop configured for application to an existing countertop-receiving structure (Page 3, 2nd paragraph), said method comprising:

collecting data via a single data collecting device, i.e., with a tape measure (page 3, 2nd paragraph);

collecting data according to a coordinate system established with respect to a countertop-receiving structure (Page 3, paragraph 2; Page 2);

the collected data comprising blueprints directly corresponding to and defining the countertop-receiving structure (Page 3, paragraph 2);

processing the collected data so as to generate a 2D profile of the countertop corresponding to the countertop-receiving structure (Page 3, paragraph 2);

the countertop representation forming a template configured so as to be usable to form the countertop (Page 3, paragraph 2);

dimensioning the countertop representation (Page 3, paragraph 2);

forming the countertop according to the template, the formed countertop thereby being correspondingly engageable with the countertop-receiving structure (Page 3, paragraph 2; Page 2).

Referring to claims 15, 33, 57, 80, AAPA teaches a method, program, and computer device further comprising configuring the template to be cooperable with computer-aided design/computer-aided manufacturing (CAD/CAM) computer software following dimensioning of the countertop representation (Page 3, paragraph 2).

Referring to claims 16, 18, 34, 36, 58, 81, AAPA teaches a method, program, and computer device further comprising configuring the template to be cooperable with a Computer Numerical Control (CNC) machine following dimensioning of the countertop representation and forming the countertop with the CNC machine according to the template (Page 3, paragraph 2).

Referring to claims 1, 19, 37, 60, while AAPA teaches collecting data via a single portable data collecting apparatus, i.e., with a tape measure (page 3, 2nd paragraph), AAPA fails to teach a method, program, and computer device wherein the data is collected with a single portable data collection module, wherein the examiner interprets the term module to require an electronic device.

Referring to claims 1, 19, 37, 60, while AAPA teaches that the collected data comprises blueprints directly corresponding to and defining the countertop-receiving structure (Page 3,

paragraph 2), AAPA fails to teach a method, program, and computer device wherein the collected data comprises a plurality of points directly corresponding to and defining the countertop-receiving structure.

Referring to claims 1, 19, 37, and 60, while AAPA teaches processing the collected data so as to generate a 2D profile of the countertop corresponding to the countertop-receiving structure (Page 3, paragraph 2), AAPA fails to teach processing the collected data so as to form a closed-boundary representation of a countertop corresponding to the countertop-receiving structure.

However, referring to claims 1, 19, 37, and 60, Kacyra teaches analogous art, wherein a system for quickly and accurately imaging and modeling 3D objects (Title of '862), wherein Kacyra specifically teaches an example directed toward modeling objects of a persons kitchen (Col. 29, line 58 – Col. 30, line 8 of '862), wherein: Kacyra teaches a method, program, and computer device wherein data is collected with a single portable data collection module (See Fig. 3A of '862). Kacyra teaches a method, program, and computer device wherein the collected data comprises a plurality of points directly corresponding to and defining a kitchen structure (Abstract; Cover figure element 30; Col. 29, line 58 – Col. 30, line 8 of '862). Kacyra teaches a method, program, and computer device including processing the collected data so as to form a closed-boundary representation of a countertop corresponding to the kitchen structure (Cover figure element 42; Col. 1, lines 7-18 of '862).

Referring to claims 49 and 72, Kacyra teaches the computer program and device above, wherein the processing portion for processing the data is further configured to define a best-fit

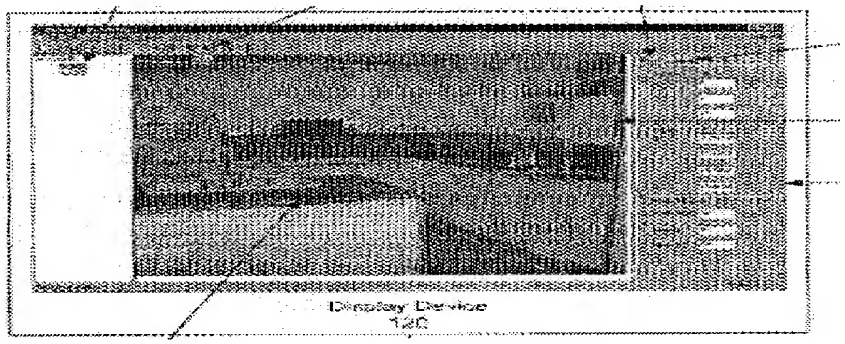
line between points. Referring to claims 50 and 73, Kacyra teaches the computer program and device above, wherein the processing portion for processing the data is further configured to define a free-form line between points. Referring to claims 51 and 74, Kacyra teaches the computer program and device above, wherein the processing portion for processing the data is further configured to define a line between points. Referring to claims 52 and 75, Kacyra teaches the computer program and device above, wherein the processing portion for processing the data is further configured to configure an intersection of lines, each line being defined by a plurality of points, to facilitate formation of the closed-boundary countertop representation (Col. 3, lines 37-46).

Therefore, it would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify the teachings of AAPA to include module for collecting a plurality of points and processing the points to form a closed-boundary representation the structure, as taught by Kacyra.

One of ordinary skill in the art would have been motivated to combine these references because Kacyra teaches a system that can quickly and accurately sense the geometric position of objects in a 3D space of a collected point cloud. Furthermore, Kacyra teaches recognizing geometric shapes represented by said point cloud and generating a model of said shapes. Further still, Kacyra teaches advantageous application of the model to CAD tools (Col. 1, lines 7-19 of '862).

However, referring to claims 1, 19, 37, and 60, Marks teaches analogous art, wherein Marks teaches building and displaying a 3D model of physical objects from a 2D image of the

physical objects (Col. 1, lines 7-10 of '847), including accurate coordinate specification of each primitive in the 3D model, wherein Marks specifically teaches that complex primitive such as a table can be used to better construct the 3D model of the physical objects more quickly (Col. 7, lines 2-7 of '847), wherein, although Marks does not say that the table is a countertop almost every figure in Marks clearly shows a table that is in a kitchen that is a countertop (See the figure below for example of '847), wherein:



Marks teaches a method, program, and computer device wherein data is collected with a single portable data collection module (Fig. 1, element 130; Col. 3, line 19 of '847). Marks teaches a method, program, and computer device wherein the collected data comprises a plurality of points directly corresponding to and defining a table structure (Col. 6, lines 35-46 of '847). Marks teaches a method, program, and computer device including processing the collected data so as to form a closed-boundary representation of a countertop corresponding to a table structure (See Figs 1-12 of '847).

Referring to claims 2, 20, 38, and 61, Marks teaches a method, program, and computer device further comprising establishing a base horizontal plane with respect to the countertop-receiving structure so as to establish an origin of a Z-axis (Fig. 1, element 140; Col. 3, lines 33-38 of '847). Referring to claims 3, 21, 39, and 62, Marks teaches a method, program, and

computer device further comprising establishing an X-axis having an origin corresponding to the Z-axis origin, the X-axis extending along the base horizontal plane (Fig. 1, element 140; Col. 3, lines 33-38 of '847). Referring to claims 4, 22, 40, and 63, Marks teaches a method, program, and computer device further comprising establishing a positive Y-direction with respect to the X-axis origin (Fig. 1, element 140; Col. 3, lines 33-38 of '847). Referring to claims 49 and 72, Marks teaches the computer program and device above, wherein the processing portion for processing the data is further configured to define a best-fit line between points. Referring to claims 50 and 73, Marks teaches the computer program and device above, wherein the processing portion for processing the data is further configured to define a free-form line between points. Referring to claims 51 and 74, Marks teaches the computer program and device above, wherein the processing portion for processing the data is further configured to define a line between points. Referring to claims 52 and 75, Marks teaches the computer program and device above, wherein the processing portion for processing the data is further configured to configure an intersection of lines, each line being defined by a plurality of points, to facilitate formation of the closed-boundary countertop representation (Col. 7, lines 60-68).

Therefore, it would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify the teachings of AAPA to include module for collecting a plurality of points and processing the points to form a closed-boundary representation the table-structure, as taught by Marks.

One of ordinary skill in the art would have been motivated to combine these references because Marks teaches that complex primitive such as a table can be used to better construct the 3D model of the physical objects more quickly (Col. 7, lines 2-7 of '847). Furthermore, Marks

teaches a system that helps the user better place the primitives and create a better model from the image (Col. 2, lines 17-18 of '847).

8. Claims 2-4, 20-22, 38-40, 61-63 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 6,389,322 to Park in view of (U.S. Pat. No. 5,642,293 to Manthey or U.S. Pat. No. 5,988,862 to Kacyra), as applied above, and further in view of U.S. Pat. No. 4,969,106 to Vogel. Claims 2-4, 20-22, 38-40, 61-63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (AAPA) in view of U.S. Pat. No. 5,988,862 to Kacyra as applied above, and further in view of U.S. Pat. No. 4,969,106 to Vogel.

Referring to claims 2, 20, 38, and 61, Park, AAPA, Manthey, and Kacyra fail to teach a method, program, and computer device further comprising establishing a base horizontal plane with respect to the countertop-receiving structure so as to establish an origin of a Z-axis (). Referring to claims 3, 21, 39, and 62, Park, AAPA, Manthey, and Kacyra fail to teach a method, program, and computer device further comprising establishing an X-axis having an origin corresponding to the Z-axis origin, the X-axis extending along the base horizontal plane. Referring to claims 4, 22, 40, and 63, Park, AAPA, Manthey, and Kacyra fail to teach a method, program, and computer device further comprising establishing a positive Y-direction with respect to the X-axis origin.

However, referring to claims 2, 20, 38, and 61, Vogel teaches analogous art, wherein Vogel teaches a method, program, and computer device further comprising establishing a base horizontal plane with respect to the countertop-receiving structure so as to establish an origin of

a Z-axis. Referring to claims 3, 21, 39, and 62, Vogel teaches a method, program, and computer device further comprising establishing an X-axis having an origin corresponding to the Z-axis origin, the X-axis extending along the base horizontal plane. Referring to claims 4, 22, 40, and 63, Vogel teaches a method, program, and computer device further comprising establishing a positive Y-direction with respect to the X-axis origin (Figs. 1-2, Abstract).

Therefore, it would have been obvious to one of ordinary skill in the art at the time that the invention was made to further modify Park or AAPA with the teachings of Vogel.

One of ordinary skill in the art would have been motivated to combine these references because Vogel teaches an automated measuring system that can be used to easily obtain and present large amounts of data for characterizing objects (Col. 1, lines 14-19; Col. 2, lines 20-66). Furthermore, Vogel teaches measurements of surfaces by applying a grid pattern to the surface and then taking 2D images of the surface and digitizing the images to yield two sets of 2D coordinates, wherein Vogel applies algorithms to smooth the geometry of these calculated surfaces (Col. 2, lines 67 – Col. 3, lines 13).

9. Claims 8, 11-13, 26, 29-31, 46, 53-55, 69, 76-78, are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 6,389,322 to Park in view of (U.S. Pat. No. 5,642,293 to Manthey or U.S. Pat. No. 5,988,862 to Kacyra), as applied above, and further in view of U.S. Pat. No. 6,553,683 to Klass. Claims 5, 8, 10-13, 23, 26, 28-31, 41-43, 46, 48, 53-55, 64-66, 69, 71, 76-78 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (AAPA) in view of (U.S. Pat. No. 5,988,862 to Kacyra or U.S. Pat. No. 6,025,847 to Marks), as applied above, and further in view of U.S. Pat. No. 6,553,683 to Klass.

Referring to claims 5, 23, 41-43, 64-66, AAPA fails to teach a method, program, and computer device wherein collecting data further comprises receiving a signal directly from each of the plurality of points with the data collection module, the data collection module being configured so as to be capable of determining a coordinate of each point with respect to the coordinate system.

Referring to claims 10, 28, 48, 71, AAPA fail to teach a method, program, and computer device wherein processing the data further comprises arranging the plurality of points according to a two-dimensional coordinate system on at least one of a horizontal plane and a vertical plane.

Referring to claims 8, 26, 46, 69, Park and AAPA fail to teach a method, program, and computer device wherein collecting data further comprises determining a coordinate of each point with respect to the coordinate system with an articulating arm extending from the data collection module directly to the respective point. Referring to claims 11, 29, 53, 76, Park and AAPA fail to teach a method, program, and computer device wherein processing the data further comprises adding an overhang component to the countertop representation, the overhang component being configured to extend outwardly of the countertop-receiving structure. Referring to claims 12, 30, 54, 77, Park and AAPA fail to teach a method, program, and computer device wherein processing the data further comprises defining an accommodation for an accessory feature on the countertop representation, the accommodation being configured to correspond to the accessory feature upon engagement of the countertop with the countertop-receiving structure. Referring to claims 13, 31, 55, 78, Park and AAPA fail to teach a method, program, and computer device wherein processing the data further comprises adding a backsplash component

to the countertop representation, the backsplash component being configured to extend generally perpendicularly to the countertop.

However, referring to claims 5, 23, 41-43, 64-66, Klass teaches a method, program, and computer device wherein collecting data further comprises receiving a signal directly from each of the plurality of points with the data collection module, the data collection module being configured so as to be capable of determining a coordinate of each point with respect to the coordinate system (Col. 6, lines 18-56). Referring to claims 8, 26, 46, 69, Klass teaches a method, program, and computer device wherein collecting data further comprises determining a coordinate of each point with respect to the coordinate system with an articulating arm extending from the data collection module directly to the respective point (Fig. 1). Referring to claims 10, 28, 48, 71, Klass teaches to teach a method, program, and computer device wherein processing the data further comprises arranging the plurality of points according to a two-dimensional coordinate system on at least one of a horizontal plane and a vertical plane (Fig. 3; Col. 6, lines 18-56). Referring to claims 11, 29, 53, 76, Klass teaches a method, program, and computer device wherein processing the data further comprises adding an overhang component to the countertop representation, the overhang component being configured to extend outwardly of the countertop-receiving structure. Referring to claims 12, 30, 54, 77, Klass teaches a method, program, and computer device wherein processing the data further comprises defining an accommodation for an accessory feature on the countertop representation, the accommodation being configured to correspond to the accessory feature upon engagement of the countertop with the countertop-receiving structure. Referring to claims 13, 31, 55, 78, Klass teaches a method, program, and computer device wherein processing the data further comprises adding a

backsplash component to the countertop representation, the backsplash component being configured to extend generally perpendicularly to the countertop (Fig. 3; Col. 6, lines 18-56).

Therefore, it would have been obvious to one of ordinary skill in the art at the time that the invention was made to further modify Park or AAPA with the teachings of Klass.

One of ordinary skill in the art would have been motivated to combine these references because Klass teaches an improved method for generating a template for applications in countertop cutting (Col. 1, lines 7-12). Furthermore, Klass teaches a template maker that eliminates problems associated with construction of a physical template because there is no physical replica of the template, instead, all the measurements are transmitted and stored on paper (Col. 2, lines 40-67).

Conclusion

10. The prior art or art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patents or publications are cited to further show the state of the art with respect to a method of forming a template for an object, the template being usable to form an object configured for application to an existing structure.

U.S. Pat. No. 4,436,684 to White.

The following patents or publications are cited to further show the state of the art with respect to CAD modeling of countertops/cabinets.

U.S. Pat. No. 5,255,207 to Cornwell.

U.S. Pat. No. 6,063,126 to Borduin.

U.S. Pat. No. 5,771,342 to Todd.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sean P. Shechtman whose telephone number is (703) 305-7798. The examiner can normally be reached on 9:30am-6:00pm, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo P. Picard can be reached on (703) 308-0538. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SPS

Sean P. Shechtman

August 8, 2004

Albert W. Paladini 8-9-04
ALBERT W. PALADINI
PRIMARY EXAMINER